Adhesive Systems, Inc.
An ISO 9001:2008 Certified Company

MAXIMUM PERFORMANCE SERIES
MP531003E
UV ADHESIVE

TECHNICAL DATA SHEET
TDS #: MP531003E
UV Adhesive

DESCRIPTION

MP531003E **is a high performance UV curing adhesive engineered to bond metals and plastics. It can be used in a variety of product assemblies and it promotes innovative design solutions. Our MP531003E is a leading performer when used for electronic and general industrial applications. This maximum performance adhesive has a deep cure and great flexibility. MP531003E is often cured with an electroless lamp D, medium pressure metal halide lamp. This UV adhesive also works well with UV light emitted diodes (UV LED) at wavelengths of 365 nm to 395 nm. Design engineers select MP5321003E for the optimum in finished product quality, reliability, performance, and cost effectiveness. MP531003E is an essential tool in improving overall product quality, lowering per unit cost, and reducing processing time.**

PHYSICAL PROPERTIES (UNCURED):

Chemical Class	Acrylate
Solvent Content	None
Appearance	Colorless Liquid
Density, g/ml	1.05
Viscosity, 25 °C, 20 RPM	3500cp-5500cp
Flash Point °C	95

PHYSICAL PROPERTIES (CURED):

Durometer Hardness	D30
Water Absorption, 2 hrs. @100 °C	4.7%
Water Absorption, 24 hrs. @ 25 °C	4.9%
Glass Transition Temperature, °C	19
Lap Shear Strength PSI Polycarb.	860
Dielectric Constant	3.2
Dielectric Strength, volts/mil	>400
Working Temperature °F	-60 to 300
Flexibility@RT	Yes
Blue Flourescing	None

Benefits

- Superior Bond Strength
- Solvent Free
- Low Odor
- Improves Finished Product Quality
- Durable
- Good Impact and Vibration Resistance
- Easily Automated
- No Clean Up

Substrate Applications

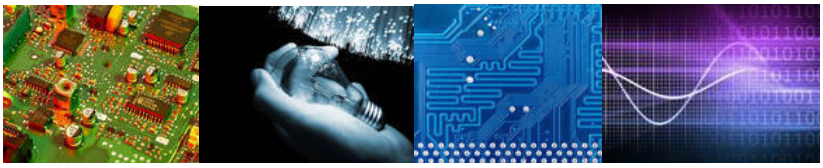
Plastics
Polyethylene,Polypropylene requires surface treatment such as corona, etc.
Metal

CURE SCHEDULE

Medium Pressure Metal Halide Flood Lamp Station @ 50mW/cm2	40 seconds @ 50% UV block Plastic
Fusion F 300 S Lamp D Conveyor @ 750 mW/cm2	Belt Speed @ 20 FPM
Fixed time between 2 Glass Slides @ low intensity black light	1 second
Cure Depth @ 50 mW/cm2 for 2 minutes	0.7 inch
UV LED 365 nm to 395 nm	Time depends on the intensity and wavelength

Storage and Shelf Life

This UV Cure material should be stored in a dark place, above 0°C and below 30 °C. The shelf life is one year from the date of manufacture.



Engineering Excellence
For technical information
and support call **1-800-552-0299** or visit our website at
www.instantca.com

Directions for Use

1. This product cures at exposure to daylight. Minimize to expose during storage and handling.
2. Surface of substrates should be clean and free from grease, mold release, or other contaminants.
3. Cure speed is dependent on UV energy, intensity of UV Light, required depth of cure and percentage of light transmission of substrates.
4. For the best performance, Fusion Lamp D or medium pressure metal halide should be used. Also, UVLED at 365 nm to 395 nm can be used.
5. Allow cured parts to cool before testing to any service loads.
6. Air inhibits a surface cure. To minimize this effect an inert gas such as nitrogen can be used or a higher intensity can be used.